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09/458,370	12/09/1999	LOUIS A. LIPPINCOTT	10559/105001	8772

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EXAMINER

HESSELTINE, RYAN J

ART UNIT PAPER NUMBER

2623

DATE MAILED: 05/16/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

19

Office Action Summary

Application No.

09/458,370

Applicant(s)

LIPPINCOTT, LOUIS A.

Examiner

Ryan J Hesseltine

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-21 and 23-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 11 March 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The proposed drawing correction filed on March 11, 2003 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-17, 19-21, and 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (USPN 5,268,853), hereafter Tanaka. The grounds for rejection stated in paragraphs 3-15 of the Office Action mailed December 4, 2002, paper number 4, are incorporated herein by reference.

4. Regarding claims 15 and 19, Tanaka discloses a method of implementing a two-dimensional inverse discrete cosine transform (column 5, line 12-17), comprising: executing a first one-dimensional inverse discrete cosine transforming function in a first direction on a first matrix of coefficients to produce a matrix of intermediate and executing a second one-dimensional inverse discrete cosine transforming function in a second, different direction on the matrix of intermediate results concurrent with the first function executing in the second direction on a second matrix of coefficients (column 11, line 58 to column 12, line 10), in which the

Art Unit: 2623

functions switch periodically and concurrently between the first and second directions (column 15, line 10-28).

5. Regarding claim 27, Tanaka discloses a method of implementing a two-dimensional inverse discrete cosine transform, comprising: executing two one-dimensional inverse discrete cosine transforming functions to operate on a sequence of matrices, some matrices being operated on first in row order, then in column order and some matrices being operated on first in column order, then in row order; and enabling the functions to each operate on matrices in row order and in column order (column 15, line 10-28).

Response to Arguments

6. Applicant's arguments filed March 11, 2003 have been fully considered but they are not persuasive.

7. Regarding applicant's arguments with respect to Tanaka as applied to claims 1 and 8 on page 3, paragraph 5, applicant states, "In Tanaka, the functions discussed at col. 5, lines 12-17 operate in only one direction, row or column, and not 'in either of two different directions.'" Examiner respectfully disagrees. Neither claim 1 nor claim 8 contains a limitation that each of the two one-dimensional IDCT functions are executed **concurrently** in different directions. The claims state, "executing two one-dimensional inverse discrete cosine transforming functions, each of the functions being controlled to operate on **a matrix** of coefficients in either of two different directions" (emphasis added). Tanaka meets this limitation since the transform is first performed on one matrix in row order, then on the same matrix in column order (column 11, line 58-column 12, line 10).

8. Regarding applicant's arguments with respect to claims 15 and 19 on page 4, first full paragraph, applicant states, "The DCT calculators 4 and 6 in Tanaka read and write in fixed directions ... The calculators do not 'switch periodically and concurrently between the first and second directions.'" While it is true that the section (column 11, line 58-column 12, line 10) states that the DCT calculators read and write in fixed direction, examiner directs applicant to the previously cited section of the Tanaka patent (column 15, line 10-28), cited with respect to claims 18 and 22 (now cancelled and incorporated into claims 15, 19, and 27). Here, Tanaka explains the use of a single memory device for temporarily storing the calculated results of a first one-dimensional DCT calculator, data are **written to** the memory device in a **row direction** thereof and are **read out** of the memory device (by the second one-dimensional DCT calculator) in a **column direction** thereof (emphasis added). Tanaka goes on to disclose that new data are **written to** the memory device in the **column direction** and are **read out** of the memory device in the **row direction**, and again, new data are **written to** the memory device in the **row direction** (emphasis added), and so on. Tanaka discloses that this reduces the required memory capacity and allows operation at high speed.

9. Regarding applicant's arguments with respect to claims 23 and 25 on page 4, last paragraph on to page 5, applicant states, "the switching circuits 20 and 22 [of Tanaka] determine which block functions read and write to which one of the memories 2a and 2b, not which direction the functions operate in..." Examiner agrees that the illustrated and cited section of the Tanaka patent merely shows the sequencer switching between memory blocks, but the examiner again points out the previously cited section (column 15, line 10-28) which shows that the two memory blocks can be incorporated into one, where the first one-dimensional DCT calculator

Art Unit: 2623

writes to the memory device in a row direction and the second one-dimensional DCT calculator reads from the memory device in a column direction, then the operation is **switched** such that the first one-dimensional DCT calculator writes to the memory device in a column direction and the second one-dimensional DCT calculator reads from the memory device in a row direction. A sequencer or the like would inherently perform this switching operation.

10. Regarding applicant's arguments with respect to claim 27 on page 5, paragraph 4, applicant states, "Tanaka does not teach or suggest 'enabling the functions to each operate on matrices in row order and in column order'..." Examiner disagrees for the reasons applied above to claims 1, 8, 15, and 19.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2623


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J Hesseltine whose telephone number is 703-306-4069.

The examiner can normally be reached on Monday - Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

rjh
May 15, 2003


AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600